ABSTRACT

A bearing suitable for use in PC card type ultra-thin hard disk drive devices is provided. The bearing device includes two bearings assembled on a shaft. Each bearing includes an inner ring, an outer ring and rolling members such as balls. The outer rings of the bearings are in close contact with each other. A space greater than 2δ, i.e., the sum of axial one-sided rattle δ of each of the two bearings is created between the two inner rings by virtue of a difference between the total width dimensions of the two outer rings and the total width dimensions of the two inner rings. Therefore, the amount of preload applied to the outer edge of either inner ring can be adjusted over a wide range and the rattling of the bearing device can be eliminated, and at the same time the desired precision and rigidity of the bearing device can be maintained. The ends of the bearings with inner ring and the outer ring aligned are apart from each other when the bearings are assembled. The distance (span) P between the rolling elements of the two bearings in the bearing device of present invention is same as the conventional bearing device. Since the dimension of the bearing device overall in the width orientation (axial orientation) is smaller, the thickness of the swing arm support can be reduced and made thinner than a swing arm that uses a conventional bearing device.